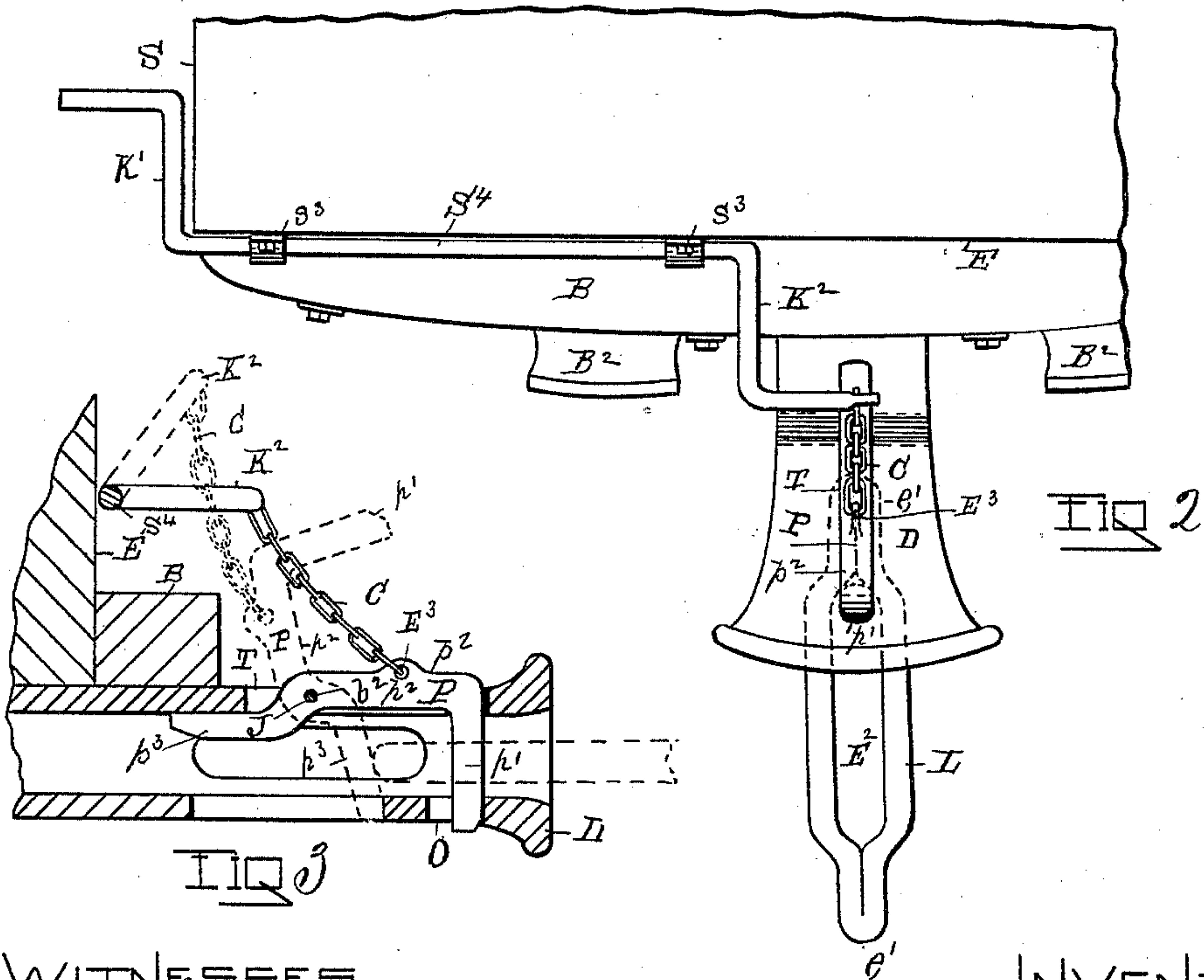
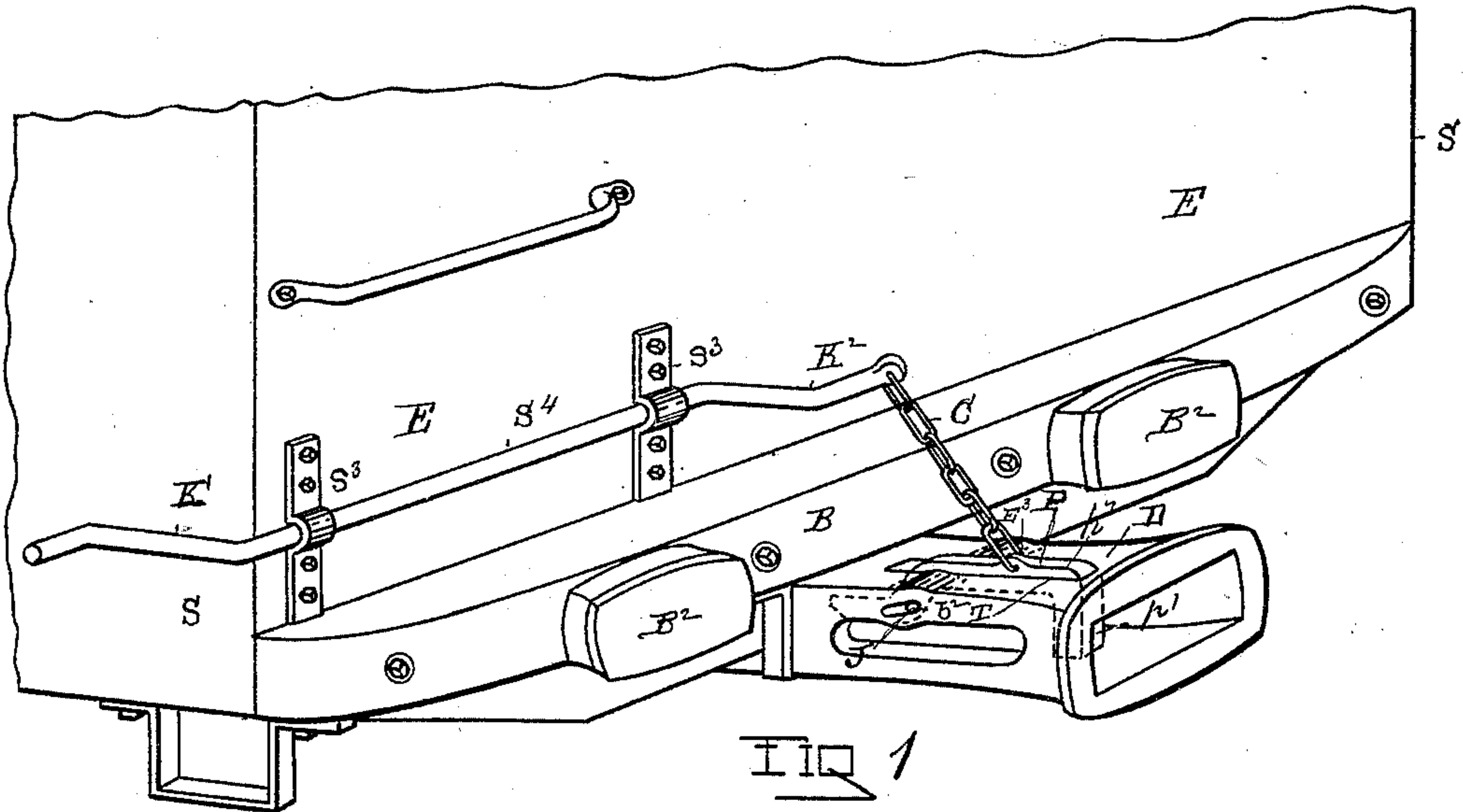


(No Model.)

P. T. MADIGAN.
CAR COUPLING.

No. 411,460.

Patented Sept. 24, 1889.



WITNESSES

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PATRICK T. MADIGAN, OF TROY, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 411,460, dated September 24, 1889.

Application filed May 1, 1889. Serial No. 309,164. (No model.)

To all whom it may concern:

Be it known that I, PATRICK T. MADIGAN, of the city of Troy, county of Rensselaer, State of New York, have invented new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention relates to improvements in car-couplers; and it has for its object their construction in such a manner as will allow of their being operated to connect and disconnect from the side of the car and without exposing to danger the person making the connection or disconnection, and the further object of simplifying the construction of this class of devices.

Accompanying this specification to form a part of it there is a sheet of drawings containing three figures illustrating my invention, with the same designation of parts by letter-reference used in all of them.

Of these illustrations, Figure 1 shows a perspective of a part of one end of a car with my invention applied thereto, which in construction and arrangement is the same at each end of the car. Fig. 2 is a top view of the same parts, showing a part of the buffer-platform and the buffers. Fig. 3 is a central vertical section taken through the draw-head, the buffer-platform, part of the car end, and the shaft which operates the connecting-pin.

The several parts of the mechanism thus illustrated are designated by letter-reference, and the function of the parts is described as follows:

The letter E designates the end of the car; the letters S its sides; B, the buffer cross-bar or platform; B², the buffers, and D the draw-head.

Letter L designates the coupler-link, which is preferably made at each of its ends to project beyond the eye E² and to be narrower thereat in its cross-measurement than where inclosing the eye, and the function of this narrower part e', when used at each end of the link, is to guide the entrance of the latter into the draw-head and to keep it in a horizontal position when being entered for connection, although, if desired, the ordinary form of link may be used.

The letter T designates a slot formed in the top of the draw-head, and O an opening in the

bottom thereof for the downward passage of the connecting-pin.

The letter b² designates bearings formed in the opposite sides of the draw-head, said bearings being in the form of slots that are inclined downward as extended rearwardly.

The letter P designates the pivoted connecting-pin, which at its front end p' is extended downwardly at right angles to its shank part p².

The letter J designates trunnion-form journals adapted to be entered in the bearings b², formed in the sides of the draw-head. Back of the journals the shank part is jogged downwardly to produce the tail-piece p³, which is extended rearwardly from where jogged downwardly to underlap the top of the draw-head thereat. The function of this tail-piece is to hold up the front end of the connecting-pin when it is turned down in position, as shown in Fig. 3.

The letter E³ designates an eye formed in the top of the pin-shank, and C a chain connected with the latter thereat.

The letter S⁴ designates a shaft having a crank K' on its outer end, and K² a crank arranged on its inner end, to which the upper end of the chain C attaches. This shaft S⁴ has bearings in the straps s³ s³, attached to the end of the car, in which to turn. With the parts thus arranged when the outer crank K' is turned the inner crank K² operates the chain C to raise from out of the draw-head on its pivoted connection the downcast end p' of the pin P to uncouple the link.

When it is desired to connect the cars, the approaching car carrying the link L from the construction of the latter guides it into the draw-head, the pin P having at its end p' been raised for its entrance by means of the cranks and the connection made between the latter and the shank of the pin by the chain C. After the link has entered, then the cranks are operated to drop the pin into place and the connection is made.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the draw-head D, made with the slot T in its upper surface, the opening O in its bottom, and having the down-

wardly and rearwardly slanting bearings b^2 ,
of the connecting-pin P, made with the down-
cast end p' , its shank or body part p^2 , tail-
piece p^3 , and having the trunnion-form jour-
nals J at each side thereof, and the chain C,
5 connecting the shank of said pin with the
crank K^2 , arranged on the shaft S^4 , having on
its outer end the crank K' , constructed and
arranged to operate substantially in the man-
10 ner as and for the purpose set forth.

2. The combination, with the draw-head D,
made with the top slot T, the opening O, made
in its bottom, and having the slotted and rear-
wardly-slanting bearings b^2 in its sides, of the
15 connecting-pin P, made with the downcast
outer end p' , the shank or body part p^2 , the

tail-piece p^3 , and having the trunnion-form
journals J at each side thereof, the chain C,
connecting with the shank of said pin, the
shaft S^4 , having thereon the cranks K' and K^2 , 20
with the latter connecting with the outer end
of said chain, and the link L, constructed and
arranged to operate substantially in the man-
ner as and for the purposes set forth.

Signed at the city of Troy, New York, this 25
9th day of March, 1889, and in the presence
of the two witnesses whose names are hereto
written.

PATRICK T. MADIGAN.

Witnesses:

W. E. HAGAN,

CHARLES S. BRINTNALL.